

INFORMATION REPORT

Poland

20 Oct 1951

Polish "Kania" Type Trainer Aircraft

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THIS IS UNEVALUATED INFORMATION

- (1) Maximum speed: 220 kilometers per hour at sea level and up, to 3,000 meters.
- (2) Cruising speed: Normal power: 180 kilometers per hour at 3,000 meters.
- (3) Economical speed: 165 kilometers per hour at 3,000 meters.
- (4) Average rate of climb: 1.8 meters per second up to 3,000 meters.
- (5) Maximum service ceiling: 6,200 meters with normal weight.
- (6) Take-off distance: Over an 18 meter obstacle - at zero wind and at sea level: 200 meters.
- (7) Fuel: Internal - normal 160 liters. External - none.
- (8) Combat range: 960 kilometers at 180 kilometers per hour at sea level and up to 3,000 meters altitude, with a normal fuel load of 160 liters.

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(b) Power Plant

- (1) Number and type of engines: one Soviet M-11 FR type engine, tractor mounted in the nose of the aircraft.
- (2) Description: five cylinders, air-cooled, radial-engine.
- (3) Take-off power: 165 horsepower at sea level, 1,750 rpm.
- (4) Normal power: 135 horsepower at sea level, 1,600 rpm.
- (5) Propellers: two-bladed wood.
- (6) Pitch control: fixed.
- (7) Armaments: none.
- (8) Maximum freight load: 300 kilograms (including aircrew).
- (9) Combat protections: none.
- (10) Type of fuels: B-72 aviation.
- (11) Fuel tanks: not protected.

(c) Air Specifications

- (1) Construction: constructed completely of wood; rudders, ailerons and elevators are covered with fabric.
- (2) Wing span: 12 meters.
- (3) Length: 13.5 meters.
- (4) Overall height: 2.35 meters.
- (5) Additional information: designed as a primary and advance trainer; it may also be used as a liaison plane. Constructed to replace the PO-2 and C-35 type trainers.

(d) Physical Characteristics

- (1) Wings: the wings were mounted high on four column struts above the cockpit and were supported by two angular struts which ran from the wing chord root to the junction with the landing gear. The wings were joined over the cockpit. A sketch is attached as Enclosure (H).
- (2) Span: approximately 12 meters.
- (3) Dihedrals: very slight upward dihedral.
- (4) Shape: surfaces tapering outwardly from the wing root to approximately one-fifth of wing length and then tapering inwardly to wing tip. Surfaces swept back approximately 15 degrees. Wing tips square. Aspect ratio very low.
- (5) Wing area: approximately 15.0 square meters.
- (6) Chord length: approximately 1.30 meters.
- (7) Wing thickness: approximately 25 centimeters.
- (8) Flaps: none.
- (9) Slots: fixed slots located approximately one-third of wing length at the wing tip.
- (10) Ailerons: length 2.5 meters. Width 45 centimeters. Fabric covered.

(e) Unusual features: built-up portion to the rear of rear cockpit to provide steady airflow.

(f) Construction: wooden frame and plywood covered. Plywood skin approximately four millimeters thick. Constructed in one piece.

(g) Empenage

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- (1) Vertical surfaces: single fin and rudder. Fin constructed of wood frame, plywood and fabric cover. Rudder is of wood on rudder.
- (2) Horizontal surfaces: have no dihedral with tapering leading edge. No trim tabs. Horizontal surfaces are e shaped, and wood covered, frame, fabric

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- (h) Unusual features: The aircraft was equipped for glider towing. The glider-tow attachment was located directly beneath the vertical stabilizer at the rear end of the fuselage. To strengthen the fuselage for glider towing, two steel cables, approximately five millimeters thick were installed in the craft, running from the tail of the plane along the floor of the fuselage to a point located approximately under the front cockpit.
- (i) Landing gear: Normal fixed-type landing gear similar to that in the American Piper Cub. The main wheels used were old Piper Cub wheels taken from war-surplus Cubs. The plane used an uncontrollable tail wheel. The approximate diameter of wheel was 25 centimeters. Main wheel strut was approximately 1.6 meters high, constructed of steel tubing and fabric covered, and utilized rubber shock absorbers located within the fuselage.
- (j) Fuel tanks: One aluminum tank located just forward of the front cockpit. The capacity of the tank is 160 liters and is filled from the top.
- (k) Oil tanks: One aluminum tank located just forward of the gas tank. The capacity of the oil tank is 16 kilograms. Pitot tube located on the left wing strut.
3. Points listed hereunder refer to source's memory sketch of the "Kania" trainer cockpit (rear pilot's cockpit). (Attached as Enclosure (B)).
- (a) Plastic cockpit windshield
 - (b) Magnetic compass
 - (c) Altimeter
 - (d) Tachometer indicator
 - (e) Position and panel light switches
 - (f) Ignition switch
 - (g) Pitot heat heater switch
 - (h) Primer fuel pump
 - (i) Throttle
 - (j) Carburetor heater
 - (k) Carburetor height correction mixture control
 - (l) Gasoline fuel valve (downward motion - off)
 - (m) Control stick
 - (n) Control stick neutralizing lock
 - (o) Flight indicator
 - (p) Airspeed indicator
 - (q) Fuel tank indicator (gasoline)
 - (r) Oil temperature indicator
 - (s) Oil pressure indicator
 - (t) Brake locks
 - (u) Rudder controls
 - (v) Starter-boosters electro-magnetic. (In order to start, turn the manually operated handle to provide extra strong ignition sparks.)
4. The front cockpit had a control stick, rudder controls, throttle, carburetor heating indicator, carburetor height correction, compass, altimeter, air speed indicator, and tachometer.

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Enclosures:

Sketch of Polish "KANIA" Type Trainer Aircraft
 Sketch of "KANIA" trainer cockpit layout
 sketch of "KANIA" trainer aircraft wing joints

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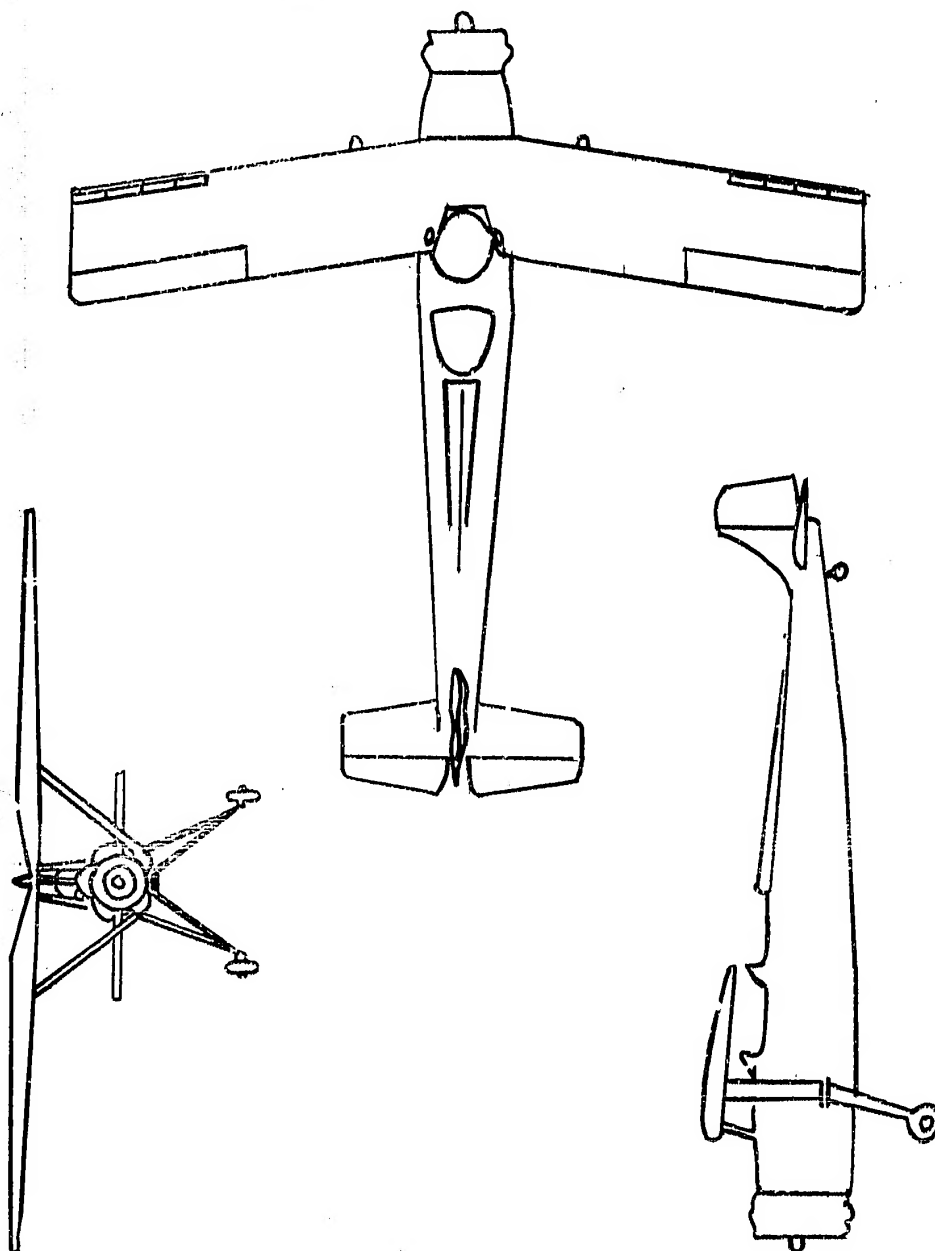
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ENCLOSURE (A)



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 Sketch of Polish
"KANIA" Type Trainer Aircraft

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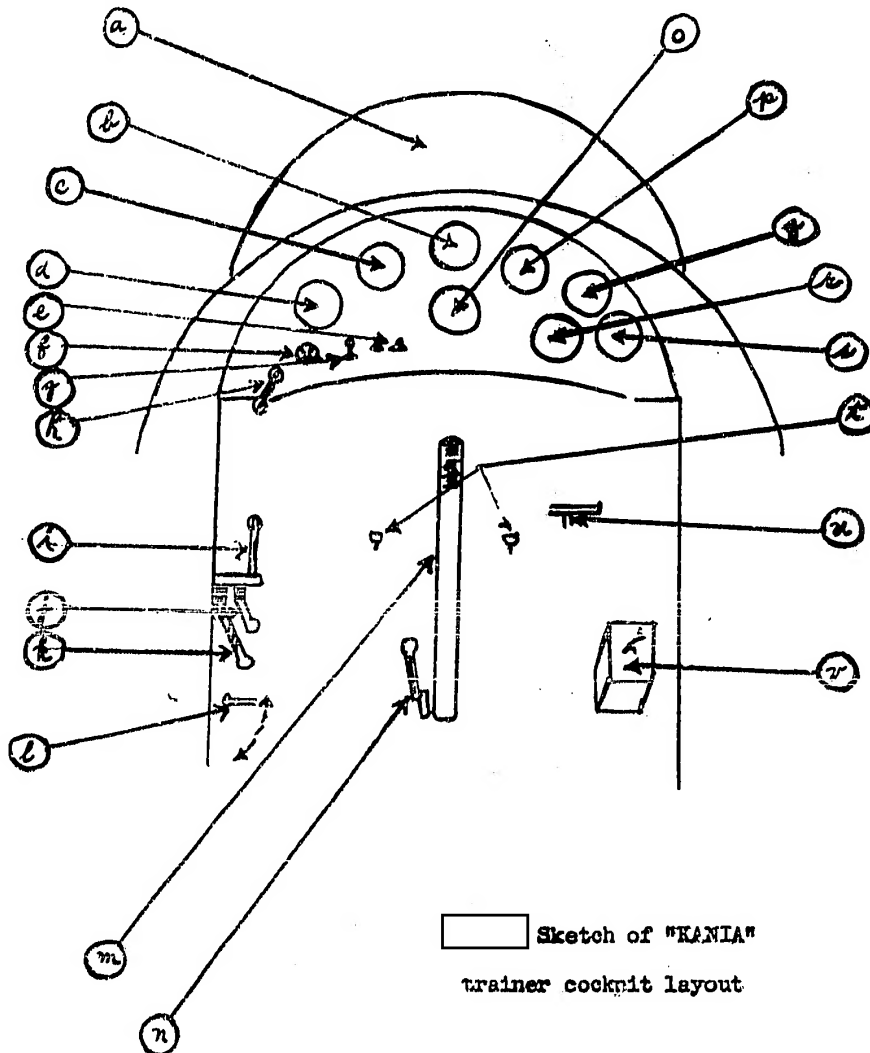
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ENCLOSURE (B)

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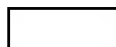
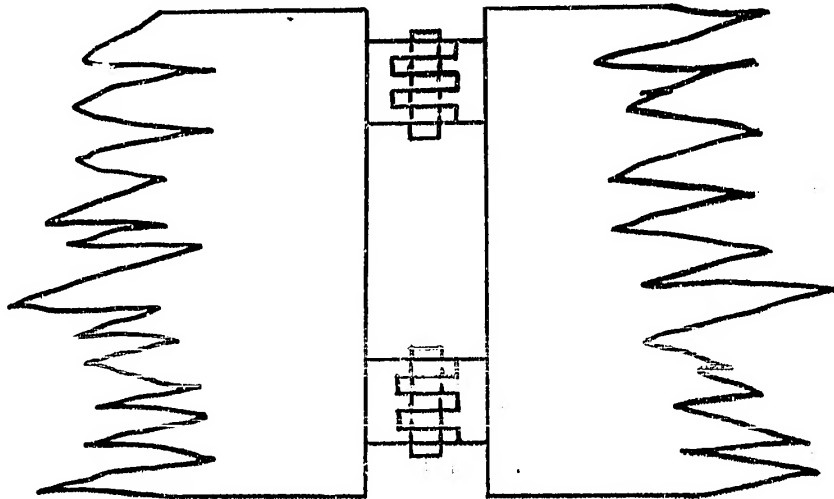
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ENCLOSURE (C)

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sketch of "KANIA" trainer aircraft wing joint

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